

# The role of networks in diffusion and uptake of climate-smart technologies in Rakai, Uganda

*Report of project inception workshops, 5-9 May 2014*

**Richard Ogwal-Omara, Michael Halewood and Gloria Otieno**



Part of the Policy Action for Climate Change Adaptation project

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## Introduction

As part of its Flagship Portfolio, the CGIAR Research Program on Climate Change and Food Security (CCAFS) has introduced Flagship 4 (FS4) on “Policies and Institutions for Climate Resilient Food Systems”. Within FS4, the project on **Policy Action for Climate Change Adaptation (PACCA)**<sup>1</sup> is being carried out in Uganda and Tanzania. The key activities of the project include: analyzing networks and actors, policy processes and trade-offs; scenario development; creating evidence-based gender awareness; applied information economics; and implementation of policy engagement actions. The project aims to use inter-disciplinary science-based recommendations to influence policy implementation that encourages adoption and adaptation of climate-smart agricultural practices among farming communities. It will design policy engagement strategies and develop national level multi-stakeholder learning alliances. The project is led by the International Institute for Tropical Agriculture (IITA), in partnership with six CGIAR centres, including Bioversity International and research partners from Uganda and Tanzania. The project is divided into seven separate, interrelated activities (see box 1 below).

### Box 1: Policy Action for Climate Change Adaptation (PACCA) project

1. Network analysis to understand drivers of CST uptake; policy analysis and engagement to guide choices for CST development and adoption for climate change adaptation.
2. Trade-off analysis of locally appropriate climate smart agricultural practices across scales.
3. Scenario development and identification of adaptation options across levels
4. Creating evidence-based gender awareness among policy actors, with intent to influence gender responsive implementation of climate change adaptation policies
5. Policy analysis to map the current status of the adaptation policies and identify entry-points for improvement.
6. Applied information economics to guide decision makers (at national level)
7. Implementation of jointly proposed policy engagement strategies

Bioversity International is coordinating Activity 1 on “Network analysis to understand drivers of climate smart technologies (CST) uptake, identify key actor linkages and climate change related policies that guide choices for CST development and adoption for climate change adaptation” (see box 2 overleaf for full description of the activity). Work is taking place in two CCAFS benchmark sites: Rakai in Uganda and Lushoto in Tanzania. The objectives of this activity are to:

- Identify: key actors involved in developing CST for climate change adaptation; CST 'on offer'; patterns of influence between intermediate organizations and farmers; CST supply and adoption; and impact of extant policies on those actors decisions or actions;
- Provide recommendations for creating and strengthening key linkages among and between farmers, CST supply organizations and policy makers;

<sup>1</sup> The CCAFS Policy Action for Climate Change Adaptation (PACCA) project was previously referred to as “Influencing and linking policies and institutions from national to local level for the development and adoption of climate-resilient food systems in East Africa”.

- Contribute to the identification of options for national-level sector-specific and overarching climate change-related policies; and
- Create a base-line against which interventions can be measured after four years (or more).

To initiate the activity in Uganda, Bioversity International organized a two-day workshop with farmers from Rakai, 5-6 May 2014 and a three-day planning workshop with national and local partners, 7-9 May, 2014. These were organized with the help and participation of IITA, the Community Integrated Development Initiatives (CIDI) (local NGO) and Rakai District's agricultural and water and environment departments.

**Box 2: Description of the Activity 1 on "Network analysis to understand drivers of CST uptake; policy analysis and engagement to guide choices for CST development and adoption for climate change adaptation" as taken from the project logframe**

"Social networks affect the diffusion of innovations through social learning, joint evaluation, social influence and collective action processes" (Monge et al, 2008). Climate-smart technologies (CST), including practices, are critical enablers of climate-informed agricultural practices that enhance food security. The project will conduct network surveys and analyses to better understand a range of factors affecting the diffusion and uptake of CST in the countries concerned, thereby providing the evidentiary basis for identifying policy interventions. The network surveys will facilitate analysis of three levels of actors and the patterns of information, incentives, guidance and influence within and between them. First, it will examine horizontal flows of information, technology and influence concerning CST within representative sample groups of farmers and farming communities. Second it will identify the range of actors/organizations involved in the development/supply of agricultural CST national-wide and horizontal flows of information, influence, resources, etc. among them. Very importantly, the surveys will interrogate the flows of information, incentives and influence between these two levels, with the possibility of differentiating information gathered on the basis of CST adopters/non-adopters, gender, assets, etc. Analyses will demonstrate empirically whether certain actors have structural or relational disadvantages (based on social and gender variables) that limit access to information or other types of resources that enable access to and capacity for the adaptive use of climate-smart technologies. The surveys will facilitate comparative analyses of the perspectives and accounts provided by both the farmer-users and the CST providers. They will also provide empirical evidence on the influence of existing national policies and programmes on the quality of interactions between these two levels of actors and the choices that they ultimately make with respect to developing and or adopting CST. In this regard, the surveys will interrogate the actual influence (or lack thereof) of formal policies and programmes, delving deeper than their stated objectives or intended effects. The surveys will be conducted at two points in time, across four years, to assess the effect of policy interventions on structures, resource flows, access to and use of innovations and together with other proposed activities, examine potential impacts on climate-informed agricultural practices and food security.



## **Participatory research on climate change and landscape level resilience in Rakai, Uganda**

In the early stages of gathering information about the Rakai benchmark site, the Bioversity team gathered as much information as they could access based on CCAFS-sponsored surveys and outcome-mapping exercises and other literature. Ultimately, the team determined that more information would be helpful to develop the network survey methodology and instruments.

The team took advantage of a tool on “Indicators of Resilience in Socio-Ecological Production Landscapes (SEPLs)” which has recently been developed by Bioversity International and the United Nations University Institute of Advanced Studies (UNI-IAS) under the framework of the *Satoyama* Initiative<sup>2</sup>. This tool takes farmers through participatory exercises to get their insights on the resilience of the farming systems in which they work at the landscape level. It was felt that a participatory exercise, using the SEPLs indicators, with farmers drawn from a number of villages in the CCAFS benchmark site would provide useful insights into the conditions of their farming systems, climate related stresses that they are facing and strategic areas for future action to improve the resilience of those systems in response to climate changes.

Two focus group discussions were held with farmers on 5 and 6 May 2014, in Kiwaguzi village and Kiganda village in Lwanda sub-county, hosted by the Rakai District Agricultural Training Centre (DATIC). The participatory exercises were facilitated by Patrick Maundu, Department of Indigenous Knowledge, Kenya National Museum (and Bioversity consultant) and Yasuyuki Morimoto, Bioversity International, Nairobi, Kenya. See Annex 1 for agenda.

The overall objective of the exercises was to:

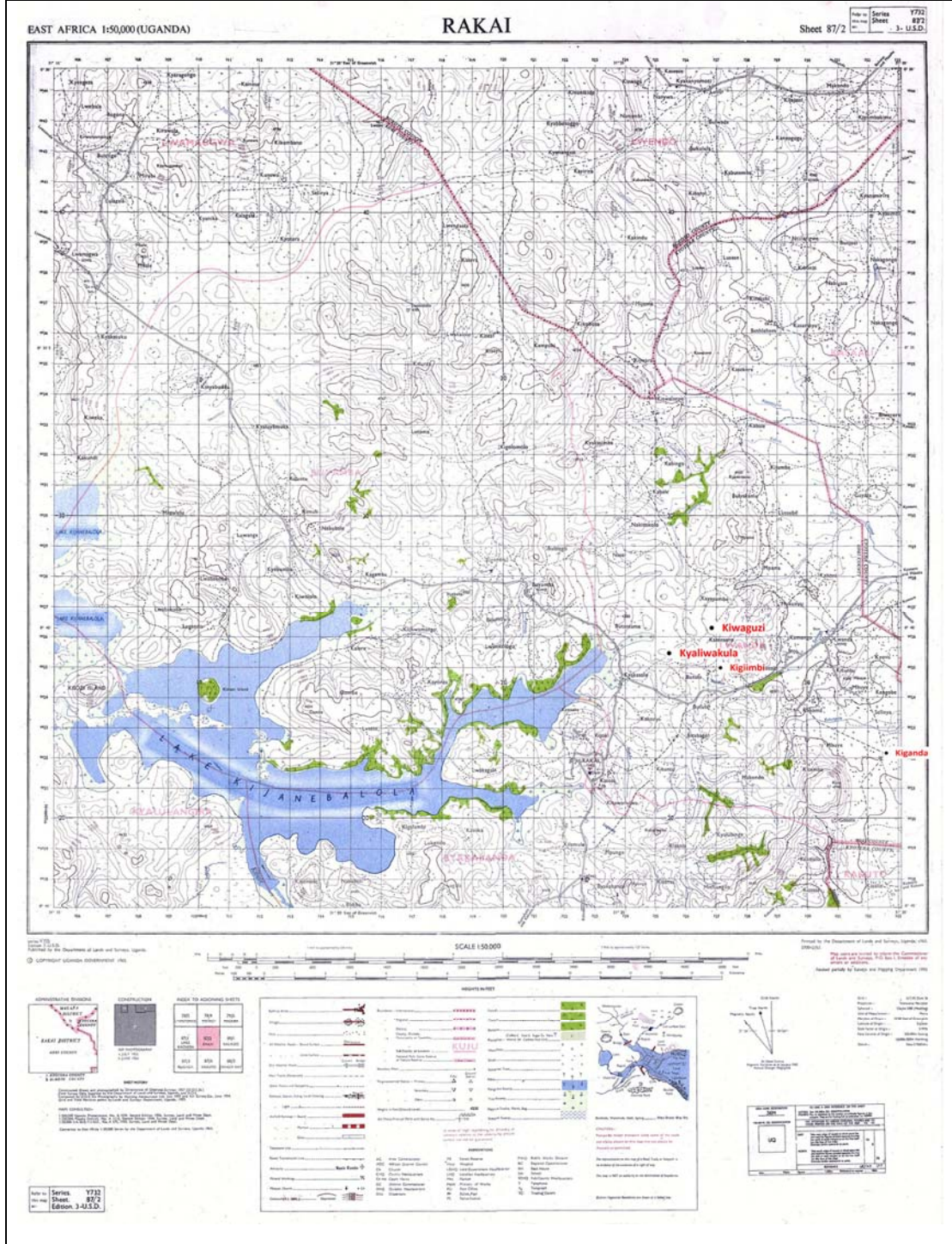
- Analyze indicators of climate resilience at the community/landscape level with groups of men and women farmers from Rakai CCAFS benchmark site (using the SEPLs indicators);
- Supplement extant information about farmers’ perceptions on climate change in Rakai, its impact on their farming systems, and adaptation options; and
- Gain information to help in the design of the network surveys.

Farmers were drawn from seven different villages which were chosen based on the landscapes and livelihood sources (see map on next page). One group was from the crop production landscape and the other from the animal livestock mix. Two different groups of farmers took part in the participatory exercise for one day each. In total there were 31 farmers in the two groups comprising 14 farmers (7 males and 7 females) in the first group and 17 farmers (10 males and 7 females) in the second group.

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<sup>2</sup> For a copy of the indicators of resilience in socio-ecological production landscapes (SEPLs) used during the workshop, see [http://www.bioversityinternational.org/uploads/tx\\_news/Indicators\\_of\\_Resilience\\_in\\_Socio-ecological\\_Production\\_Landscapes\\_SEPLs\\_1676.pdf](http://www.bioversityinternational.org/uploads/tx_news/Indicators_of_Resilience_in_Socio-ecological_Production_Landscapes_SEPLs_1676.pdf) For the forthcoming updated version of SEPLs, visit <http://www.bioversityinternational.org/index.php?id=146>

# Map showing villages in Rakai, Uganda



The exercise involved mapping their community showing major features such as roads, rivers, hills and trading centres. The participants also listed the species and breeds and their relative importance.

In Kiwaguzi A, Kiwaguzi B and Kyalwakula villages, the most commonly grown crops for food security in order of importance were: East African Highland banana ('matooke') (*Musa acuminata* (AAA-EA); maize (*Zea mays*); cassava (*Manihot esculenta* Crantz) and Irish potato (*Solanum tuberosum*), sweet potato (*Ipomea batatus*) and yam (cocoyam) (*Colocasia esculenta*). In terms of economic importance coffee (*Coffea canephora*), beans (*Phaseolus vulgaris*), maize, Irish potato, 'matooke' and cassava were listed. The trend shows an increase in the production of potato, beans, maize, coffee, groundnut (*Arachis Hypogea*), eggplant (*Solanum melongena*, *Solanum gilo*) and cabbage (*Brassica oleracea capitata*), while production of sweet potato, cassava, cocoyam and pumpkin (*Cucurbita mixta*) have remained constant. Pigs were cited as the most important livestock in the community. Other livestock kept include cattle, chicken, ducks and goats.

In the Kiganda, Lukyamo, Kigiimbi and Gosoola villages, over 30 crops were mentioned including vegetables such as tomato (*Solanum lycopersicum*), amaranthus (*Amaranthus* L.), cabbage and onion (*Allium cepa*) and fruits. However, the most important crops are maize, beans, groundnut, peas, Irish potato, sweet potato and 'matooke'. Major livestock kept by farmers are cattle, goats, pigs, sheep, chicken and ducks. There is an increasing trend in the production of maize and beans while production of Irish potato, cassava, 'matooke' and tomato is decreasing.

The farmers provided feedback on the SEPLs indicators, working through 20 questions concerning: biodiversity and ecosystem protection; agricultural biodiversity; knowledge and innovation; landscape governance and social equity; and livelihoods and well-being. For each question, participants scored their answers from 1 (very low resilience) to 5 (very high resilience) and provided their impressions of the resilience of their agro-ecosystems. They also discussed the challenges they face related to climate change and the perceived opportunities to respond to those challenges.

### **Results of participatory exercises**

Shared natural resources such as wetlands, water, forests and pastures are being degraded due to the combination of population pressures, poverty, lack of enforcement of environmental protection laws and a lack of locally coordinated collective actions to manage these resources. Generally farmers are aware of the effects of climate change, most often citing shifting rain patterns. Some report changing their farming practices in response to climate change, for example, planting hybrid maize varieties such as 'Longe 5', 'PANNAR' and 'Zimbabwe' due to their early maturity and tolerance to pests and diseases. A few farmers report that they maintain local maize varieties, stating they were equally early in maturing and less costly. All of the farmers maintain complex mixed systems, cultivating up to 50 species of plants and many keep a small number of goats, chickens or cattle. It appears that more farmers are introducing livestock into their farms to generate income (selling offspring) to be able to buy food during food-insecure periods. Most solutions to environment and farming systems challenges which the farmers identify focus on their individual holdings. There was very little discussion on solutions at collective, community or landscape levels. The migratory tendencies by pastoralists also expose the land to a lot of

pressure. Sharing of genetic resources (seeds and planting) materials among the farmers is minimal except for small quantities.

Translations to and from Luganda, the local language, were kindly provided by Rose Nyanka, Bioversity International, Uganda. A full analysis and write up based on the participatory exercises is under preparation and will be shared with CCAFS partners working on the project in the Rakai benchmark site. A summary form will also be prepared for the communities concerned. Outputs will also be compared with the results of a similar exercise, to be conducted later in 2014 in the Lushoto, Tanzania benchmark site.



Photo 1: Discussing community map, Kiwaguzi



Photo 2: Participatory exercises, Kiwaguzi



Photo 3: Participatory exercises, Kiganda village



Photo 4: Participatory exercises, Kiwaguzi



Photo 5: Eric Welch, Kiganda



Photo 6: Lunch in Kiganda



Photo 7: Discussing trends, Kiwaguzi



Photo 8: Drawing community map, Kiganda



Photo 9: Participatory exercises, Kiwaguzi



Photo 10: Landscape, Rakai





## **Planning Workshop: Tools, methods and work plan for network analysis of factors affecting diffusion and update of climate-smart technologies and options for policy reforms**

The project planning workshop was held 7-9 May, 2014 in Kyotera town, Rakai District. Participants included representatives from Bioversity International, International Institute for Tropical Agriculture (IITA), Arizona State University, International Centre for Tropical Agriculture (CIAT), National Agricultural Research Organization (NARO), Community Integrated Development Initiatives (CIDI), Rakai District local government departments of agriculture, water and environment and local council officials. See Annex 2 for the workshop agenda, Annex 3 for the list of participants and Annex 4 for the list of presentations. Photos from the workshop are shown on the following pages.

As its name suggests, the aim of the workshop was to develop the work plan and tools to be used as part of Activity 1 on “Network analysis to understand drivers of climate smart technologies (CST) uptake, identify key actor linkages and climate change related policies that guide choices for CST development and adoption for climate change adaptation”. More specifically, the objectives were to:

- Finalize development of the network survey methodology, sampling framework and survey instruments;
- Promote synergies with other activities in the Flagship project;
- Explore and solidify partnerships with other organizations in the project; and
- Develop a related work plan reflecting all of the above.

### **Presentations<sup>3</sup>**

Edidah Ampaire from IITA, coordinator of the Policy Action for Climate Change Adaptation (PACCA) project gave an overview of the project. She emphasized that the network analysis activity carried out by Bioversity will provide crucial information to be used for the other research activities especially the trade-off analysis, policy analysis and gender-related research work. She also highlighted the need to document every process through the Learning Alliance, which is a platform for discussion and possible update of project outcomes. She further mentioned that the project will work together with other agencies to build on existing information and knowledge, through the Learning Alliance.

Michael Halewood from Bioversity International provided an overview of the activity on “Network analysis to understand drivers of climate smart technologies (CST) uptake, identify key actor linkages and climate change related policies that guide choices for CST development and adoption for climate change adaptation” (Activity 1), highlighting the importance of having the buy-in and support from local government officials and organizations to ensure that the project is useful and conducted in appropriate ways,

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<sup>3</sup> See Annex 4 for list of presentations. Copies of presentations are available from the Genetic Resources Policy blog at <http://grp2.wordpress.com/2014/11/14/climate-smart-technologies-in-rakai-uganda/>.

building on local institutions, capacities and interests. See pages 3-4 for description of Activity 1.

Geoffrey Lubinga from CIDI presented the current situation in Rakai District and highlighted the efforts that are in place to deal with the challenges of climate change. He stressed the need for continued partnership and support in dealing with climate change.

Eric Welch from Arizona State University introduced network analysis concepts and the surveys that the project is developing. He emphasized that it would be critical to get feedback from the workshop participants to be able to complete the survey.

Caroline Mwongera from CIAT presented Activity 2 on “Trade-off analysis of locally appropriate climate smart agricultural practices across scales”. The analysis will integrate whole farm crop-livestock systems and monitor trade-offs between the different climate-smart agriculture pillars: food security, farming systems resilience; and climate change mitigation. The analysis will include a disaggregation on the basis of various social criteria such as age, gender and across the policy landscape. She underscored that the trade-off analysis-related research will also build on the results of the network analysis.

Eliezer Moses from Lushoto District Council, Tanzania, gave a presentation on the benchmark site in Lushoto which is also included in the project. He highlighted how climate change impacts on agriculture are being addressed.

Priscilla Tumuhimbise from the National Agricultural Research Laboratories (NARL) of the National Agricultural Research Organization (NARO), Uganda presented her organization’s work with farmers on various adaptation technologies including crop and variety selection, off and on-farm livelihood strategies, water harvesting and storage technologies.

Kathryn Snyder from CIAT Nairobi, Kenya, participated via skype and presented Activity 5 of the project on “Policy analysis to map the current status of the adaptation policies and identify entry-points for improvement”. She stated that the policy analysis will build on the policy work that has already been done by IITA and will look at implementation strategies from national to local level, identify the actors involved and gaps and constraints to policy implementation. She also suggested various policy related questions that should be included in the network survey.

Jamil Kiyinji from the District Natural Resources Office, Rakai gave an overview of the current status of the environment in Rakai. He emphasized a high level of disconnection between policy formulation and policy implementation. Among the challenges to full implementation of land use policies are technical and financial resources and the attitudes of the local communities.

Edidah Ampaire also leads Activity 4 on “Creating evidence-based gender awareness among policy actors, with intent to influence gender responsive implementation of climate change adaptation policies”. She informed the participants that this activity is intended to provide evidence concerning the differential impact of climate change on women and to identify interventions that are informed by that analysis to increase the ability of women and men to adapt to climate changes. She confirmed that she expects to draw useful formation



from the network analysis. She also promised to share relevant documentation regarding work already done in the area.

### **Focusing on climate smart technologies in the benchmark site**

After presentations and discussion, participants reflected on important (and potentially important) climate-smart technologies for the Rakai benchmark site. To accomplish this exercise, participants were divided into two groups. Each group developed detailed lists of technologies and then clustered them into broader unifying categories. The outputs of the two groups were synthesized with the resultant 12 broad categories set out in Box 3 below. This list will be incorporated into the household level network survey.

#### **Box 3: Climate-smart technologies in Rakai, Uganda**

- Improved crop variety
- Local crop variety
- Improved animal breeds
- Local animal varieties
- Crop pest and disease management
- Soil fertility management
- Water management
- Climate information and knowledge
- Managing diversity on farm
- Animal health management
- Livestock management
- Natural resource management

The group also analyzed the benchmark site, defining areas that were distinct on the basis of landscape, farm types, income and livelihoods. This information will help the Bioversity team develop its sampling design.

### **Potential project partners**

The participants developed a list of potential partners as indicated in Box 4 overleaf.

#### Box 4: Potential project partners

- Extension workers from both NGOs and government
- Government
- NGOs
- Prominent farmers
- Religious institutions
- Local leaders e.g. councilors, local councils (LCs)
- Research institutions e.g. NARO and the CGIAR centres
- National Agricultural Advisory Services (NAADS)
- Uganda Coffee Development Authority (UCDA)
- Learning institutions e.g. universities and agricultural colleges
- Line ministries/departments
- District departments e.g. agriculture, environment and planning
- National Environment Management Authority (NEMA) and National Forestry Authority (NFA)
- Collaborative forest management groups – based on local community groups and local institutions
- Beach Management Units (BMUs)
- VI – Agroforestry – A local NGO
- Ecotourism centres
- Museums
- Farmers' groups
- The media
- Private sector actors e.g. coffee and other nursery operators

#### Follow up activities

Follow up activities identified by the workshop participants are listed below:

- Access and synthesize CCAFS household survey data concerning changes that farmers have made to their practices in response to perceived climate changes;
- Carry out literature review concerning climate-smart technologies;
- Share the report with partners and other organizations in the district; Develop a summary version in Luganda, the local language for the participating farmers;
- Revise the household survey tool based on comments from the exercises in Rakai and share it with partners for their inputs;
- Pretest the survey in Rakai and make revisions for the final survey;
- Develop the survey tool for intermediate technology providers with links to the benchmark sites;
- Organize activities in Lushoto, Tanzania; and
- Follow up with Caroline Mwongera, IITA, regarding the IFPRI survey which captured some of the information on climate smart agriculture.

Charles Njuba, Chairman for the Gender and Welfare Committee of Rakai District officially closed the workshop, reiterating continued support for the project from him and his office.

**Selection of photos from the planning workshop, Kyotera, Rakai, Uganda, 7-9 May 2014.**

Photo 11: Charles Njuba, Chairman for the Gender and Welfare Committee of Rakai District and Michael Halewood, Bioversity International



Photo 12: Edidah Ampaire, IITA, PACCA Coordinator presents the project

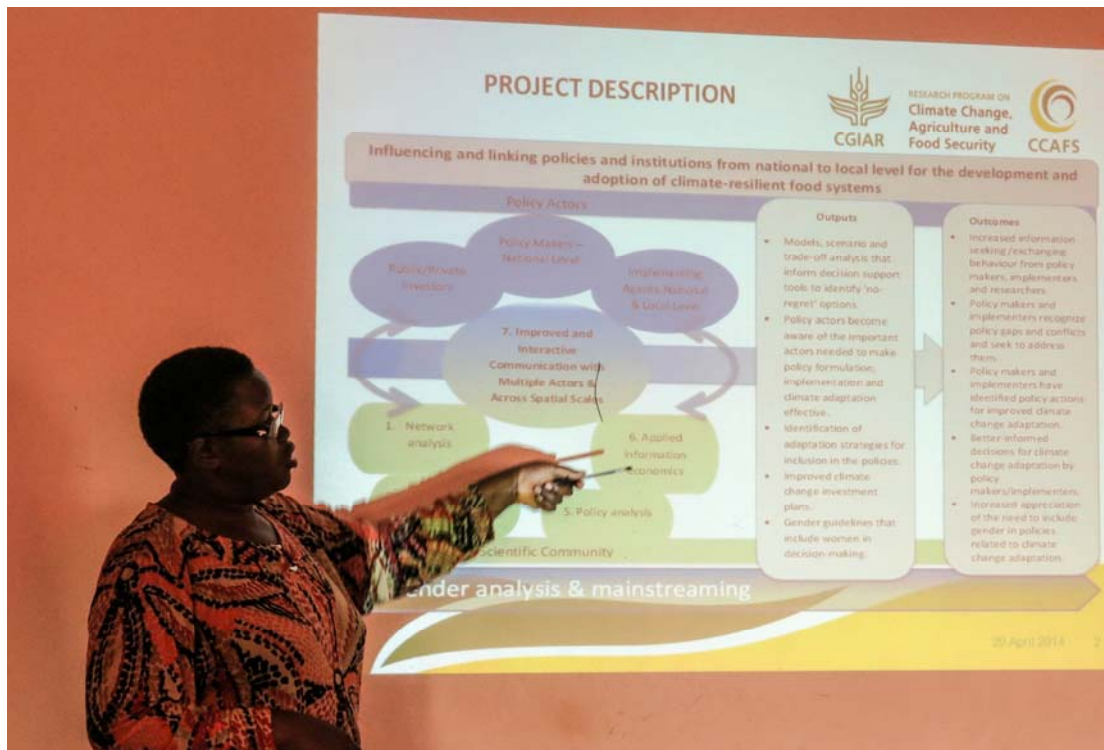


Photo 13: Michael Halewood, Bioversity International discussing the project site

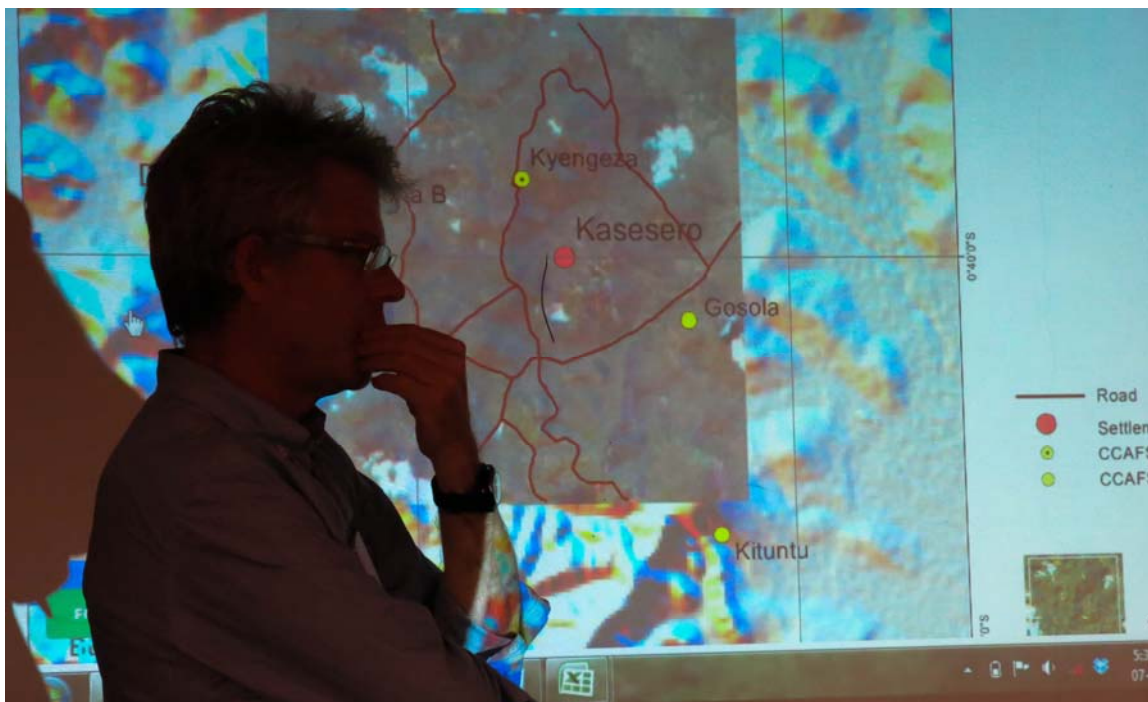


Photo 14: Small group discussions





Photos 15 and 16: Workshop participants



## **Annex 1**

**Agenda: Participatory research: climate change and landscape level resilience in Rakai district** (Part of the CCAFS Policy Action for Climate Change Adaptation (PACCA) project)

### **Objectives:**

- To analyze indicators of climate resilience at the communities/landscape level with groups of men farmers and groups of women farmers from Rakai;
- To supplement extant information about farmers' perceptions about climate changes in Rakai, its impact on their farming systems, and adaptation options; and
- To gain information to help in the design of the network surveys for use in the project.

**Schedule and venue:** 5 May 2014, Rakai District Agricultural Training Centre (DATIC), Kiwaguzi village, Rakai District, Uganda.

- Welcome and introduction of participants - facilitated by Richard Ogwal-Omara, Bioversity International Uganda office and Lawrence Kirangwa, Community Integrated Development Initiatives (CIDI).
- Participatory exercises/focus group discussions - facilitated by Patrick Maundu, Bioversity International consultant and Yasuyuki Morimoto, Associate Scientist, Ethnobotany, Bioversity International, Kenya. Interpretation provided by Rose Nanyka, Bioversity, Uganda.

**Schedule and venue:** 6 May 2014, Kiganda village in Lwanda sub-county, Rakai District, Uganda

- Welcome and introduction of participants - facilitated by Richard Ogwal-Omara, Bioversity International Uganda office and Lawrence Kirangwa, Community Integrated Development Initiatives (CIDI).
- Participatory exercises/focus group discussions - facilitated by Patrick Maundu, Bioversity International consultant and Yasuyuki Morimoto, Associate Scientist, Ethnobotany, Bioversity International, Kenya. Interpretation provided by Rose Nanyka, Bioversity, Uganda.

## Annex 2

**Agenda: Activity 1 planning workshop: Tools, methods and work plan for network analysis of factors affecting diffusion and uptake of climate smart technology (CST) and options for policy reform** (Part of the CCAFS Policy Action for Climate Change Adaptation (PACCA) project)

**Venue:** Serona Hotel, Kyotera, Rakai, Uganda 7-9 May, 2014

### Objectives:

- To finalize development of network survey instruments and methodology;
- To promote synergies with other activities in the project; and
- To develop follow-up work plan and solidify partnerships
- 

Time	Programme	Day 1 Chair: Michael Halewood
<b>DAY 1</b>	<b>Wednesday 7 May 2014</b>	
08:00-08:30	Welcome and introductions	Michael Halewood and Richard Ogwal-Omara, Bioversity International
08:30-10:00	Overview of Flagship 4 project Overview of Activity 1 on network analysis	Edidah Ampaire, IITA Michael Halewood
<i>10.00 – 10.30</i>	<i>Coffee break</i>	
10:30-11:30	Summary of situation in Rakai	Yusuf Lubega, Rakai District Agricultural Officer and Geoffrey Lubinga, CIDI Rakai
11: 30-13:00	Networks and network concepts	Eric Welch, Arizona State University
<i>1:00 – 2:00 pm</i>	<i>Lunch break</i>	
2:00 – 3.00 pm	Introduction to draft surveys developed for community level network analysis	Eric Welch
3.00- 4:30 pm	Farmers household survey revisions	Eric Welch

Time	Programme	Day 2 Chair: Richard Ogwal-Omara
<b>DAY 2</b>	<b>Thursday 8 May 2014</b>	
08:30-09:00	Registration	Richard Ogwal-Omara
09:00-09:30	Review of day 1 and what needs to be done in day 2	Gloria Otieno, Bioversity International
09:30-10:15	Trade off analysis in Activity 2: Exploring linkages with network analysis	Caroline Mwongera, CIAT
<i>10:15-11:30</i>	<i>Coffee break</i>	
11:30-12:30	Climate Change, Agriculture and Food Security (CCAFS), Lushoto	Eliezer Moses, Lushoto District Council, Tanzania
12:30-1:00 pm	Discussions	Richard Ogwal-Omara
<i>1:00-2:00 pm</i>	<i>Lunch break</i>	
2:00-5:00 pm	Two small group exercises to categorize climate smart technologies in Rakai benchmark site	Chairpersons: Edidah Ampaire and Geoffrey Lubinga
5.00 – 6.00 pm	Analyzing the map of the benchmark site for sample framework purposes	Michael Halewood and Eric Welch

Time	Programme	Day 3 Chair: Caroline Mwongera
<b>DAY 3</b>	<b>Friday 9 May 2014</b>	
09:00-10:00	Policy work in Activity 5: exploring linkages with the network analysis	Katherine Snyder, CIAT (via skype call)
10:00-10:15	Review of day 2 and what needs to be done in day 3	Richard Ogwal-Omara
10:15-11:00	State of the environment in Rakai	Jamil Kiyinji, District Natural Resources Officer, Rakai
<i>11:00-11:30</i>	<i>Coffee break</i>	
11:30-12:00	Gender work in Activity 4: exploring linkages with the network analysis	Edidah Ampaire
12:00-12:15	Closing remarks	Michael Halewood
12: 15-12:30 pm	Closure of workshop	Charles Njuba Nsimbe, Kyebe sub-county, Councilor and Rakai District Chairman for the Gender and Welfare Committee



### Annex 3

**Participants of the Activity 1 planning workshop: Tools, methods and work plan for network analysis of factors affecting diffusion and uptake of climate smart technology (CST) and options for policy reform, Serona Hotel, Kyotera, Rakai, Uganda, 7-9 May 2014.**

Name	Address	Email
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Yusuf .W. Lubega	Rakai District Agriculture Office, Uganda	Yebuwa00@gmail.com
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Eric Welch	Arizona State University, USA	EricWelch@asu.edu

## **Annex 4**

### **List of presentations<sup>4</sup>**

Edidah Ampaire, IITA, “Influencing and linking policies and institutions from national to local level for the development and adoption of climate-resilient food systems in East Africa”.

Michael Halewood, Bioversity International, “Network analysis to understand drivers of climate smart technologies (CST) uptake, identify key actor linkages and climate change related policies that guide choices for CST development and adoption for climate change adaptation”.

Geoffrey Lubinga, CIDI, “State of the environment in Rakai District”.

Eric Welch, Arizona State University, “Introduction to social network concepts and application”.

Caroline Mwongera, CIAT, “Trade-off analysis of locally appropriate climate smart agricultural practices across scales”.

Eliezer Moses, Lushoto District Council, “CCAFS research project, Lushoto, Tanzania”.

Priscilla Tumuhimbise, National Agricultural Research Laboratories (NARL), National Agricultural Research Organization (NARO), “Strategies, tools and methods in preparedness systems”.

Jamil Kiyinji, District Natural Resources Office, Rakai, “Status of environment and natural management in Uganda”.

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<sup>4</sup> Copies of presentations are available from the Genetic Resources Policy blog at <http://grpi2.wordpress.com/2014/11/14/climate-smart-technologies-in-rakai-uganda/>

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